

## INLAND BREEDING RECORDS FOR TWO MISTLETOE BUTTERFLIES (LEPIDOPTERA) FROM NORTHERN VICTORIA

MICHAEL F. BRABY

*School of Botany and Zoology, The Australian National University, Canberra, ACT 0200*

### Abstract

New inland distribution records and evidence of breeding are provided for *Delias harpalyce* (Donovan) (Pieridae) and *Ogyris abrota* (Westwood) (Lycaenidae) from the Murray River near Tocumwal in northern Victoria. Their early stages are associated with *Muellerina eucalyptoides* (DC.) B.A. Barlow parasitising *Eucalyptus camaldulensis* Dehnh. in riverine tall woodland.

### Introduction

*Delias harpalyce* (Donovan) and *Ogyris abrota* (Westwood) are restricted mainly to the temperate areas of southeastern Australia (Common and Waterhouse 1981), with the latter extending to upland areas in NE Qld (Braby 2000). Both species breed predominantly in the foothills and montane areas of the Great Dividing Range and nearby mountains, up to about 900 m, as well as in coastal areas. They are ecologically dependant on mistletoes as their larval food plants. In Victoria, *Muellerina eucalyptoides* (DC.) B.A. Barlow (Loranthaceae) is the sole larval food plant of *O. abrota* and one of several species used by *D. harpalyce* (Common and Waterhouse 1981, Braby 2000). The two butterfly species do not extend far inland on the slopes and plains west or north of the Great Divide, especially *O. abrota* (Dunn and Dunn 1991). In Victoria, individuals of *D. harpalyce* are occasionally recorded from the mallee in the far northwest of the State (Gullan *et al.* 1996, Museum Victoria 2002, F. Douglas pers. comm.), but these are believed to be vagrants/migrants dispersing far beyond the breeding range (Braby 2000). The northernmost limit of *O. abrota* in Victoria is 2 km SE of Harcourt (*c.* 25 km S of Bendigo) in the central area (Dunn 1983); the species otherwise is not known from the northern or northwestern areas of the State (Gullan *et al.* 1996, Museum Victoria 2002). Here I document new breeding localities for both species from the Murray River in inland northern Victoria.

### Observations

#### *Delias harpalyce* (Pieridae)

Three males were recorded on the Murray River at Tocumwal, NSW, on 27 September 1987. The individuals were at rest, with wings closed and folded over their backs, perched low down on the foliage of River Red Gum, *Eucalyptus camaldulensis* Dehnh. growing on the bank of the river very close to the town. They were in 'fresh' condition and had probably just emerged; one male was collected and retained. Subsequently, on 24 December 1989, several empty pupal cases were recorded nearby at Tocumwal Regional Park, Vic, on *Muellerina eucalyptoides* parasitising *E. camaldulensis*. The mistletoe clump, situated about 1.5 m above ground level, grew on the trunk of the host tree. Tocumwal Regional Park lies directly opposite the township of Tocumwal on the southern side of the Murray River.

*Ogyris abrota* (Lycaenidae)

Early stages were recorded at Tocumwal Regional Park, Vic. (35°48'58"S, 145°33'31"S; 110 m a.s.l.) on 2 March 2005. Numerous empty, white egg shells and several empty, pale brown pupal cases were collected from a large pendulous clump of *Muellerina eucalyptoides*, also growing low down (c. 3 m above ground level) and parasitising the trunk of a large *E. camaldulensis*. Old larval feeding scars were also evident on the foliage. No other mistletoe species were present on the host tree. The eggs were found singly or, sometimes, in small groups on the adventitious roots of the mistletoe and on the bark, especially the edges, of the host tree directly beneath or adjacent to the roots of the mistletoe. The pupae were found under loose bark of the host tree directly beneath the mistletoe and were well concealed. No live stages were present, but the condition of the eggs and pupae suggested they were possibly only one or two seasons old.

**Discussion**

The records of early stages and other evidence from northern Victoria provide new inland breeding records for *Delias harpalyce* and *Ogyris abrota*. The occurrence of *O. abrota* near Tocumwal, in particular, provides a substantial extension to the known range of this species in that State (c. 170 km NE of Harcourt). Both butterfly species were recorded breeding on the same mistletoe species in riverine tall woodland dominated by *Eucalyptus camaldulensis*, along the flood plain of the Murray River. It is highly probable that this habitat provides suitable microclimatic conditions of higher moisture and lower temperature to sustain breeding populations in the otherwise hot, dry environment of the inland northern plains. Further field studies are required to determine the extent to which both species extend further downstream (inland) along the Murray River corridor. It is likely that populations of these two species at Tocumwal are isolated from those further south on the slopes and foothills of the Great Dividing Range, but may well be connected with those further east near the headwaters of the Murray River in Kosciuszko National Park, NSW and Alpine National Park, Vic.

**References**

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